Exhibit 1

Docket No. P-11121

ASSIGNMENT

WHEREAS we, JAMES WEB KASSEBAUM of the City of Indianapolis, County of Marion, State of Indiana, PAUL THOMAS PUGH of the City of Knightstown, County of Henry, State of Indiana, and WILLIAM WEBSTER THOMPSON of the City of Indianapolis, County of Marion, State of Indiana, have made an invention which is the subject of a PROVISIONAL PATENT APPLICATION, titled TOPICAL ORGANIC ECTOPARASITICIDAL FORMULATIONS; and comprising 20 pages (hereinafter the "Application"); and

WHEREAS ELI LILLY AND COMPANY, an Indiana corporation having its principal place of business at Lilly Corporate Center, Indianapolis, Indiana 46285, wishes to acquire our entire right, title, and interest in the Application and in all inventions disclosed in the Application;

NOW, THEREFORE, in consideration of the sum of one dollar (\$1.00) and other good and valuable consideration, the receipt of which is hereby acknowledged, we hereby sell, assign, transfer and set over unto Eli Lilly and Company, its successors and assigns (collectively, "Lilly") our entire right, title, and interest in, the Application and in all inventions disclosed therein; all rights of priority thereto pursuant to the International Convention for the Protection of Industrial Property; any and all present or future patent applications to such inventions that may be filed in the United States or any foreign country, inclusive of, but not limited to, continuations, continuations-in-part, divisions, substitutions, reexaminations, reissues, international applications under the Patent Cooperation Treaty ("PCT"), United States provisional patent applications, certificates of addition, utility models, petty patents, as well as all other intellectual property related to the Application, inclusive of, but not limited to, supplementary protection certificates, copyrights, trademarks, and data package exclusivity rights; and any and all Letters Patent of the United States and of all foreign countries and all related patent term extensions which may be granted for Letters Patent with respect to the Application; all of the above to be held and enjoyed by Lilly for its own use and enjoyment to the full end of the term or terms for which such Letters Patent and related intellectual property rights may be granted, as fully and entirely as the same would have been held and enjoyed by us had this Assignment and sale to Lilly not been made.

For ourselves and for our heirs, successors and legal representatives, we covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this Assignment.

For ourselves and for our heirs, successors and legal representatives, we further covenant and agree with Lilly that upon request we and they will, without further consideration than that now paid, but at the expense of Lilly: (i) execute original, provisional, substitute, continuation, divisional, continuation-in-part, reexamined, or reissued applications, amended specifications, or rightful declarations or oaths for such application; (ii) communicate to Lilly any facts known to us or them relating to such inventions or the history thereof; (iii) execute preliminary statements and testify in any interference proceedings, litigation discovery proceedings and depositions, oppositions, cancellation proceedings, priority contests, public use proceedings, administrative agency proceedings, litigation and other court actions and the like; (iv) execute and deliver any application papers, affidavits, declarations, assignments, or other instruments; and (v) do all other acts which, in the opinion of counsel for Lilly, may be necessary or desirable to secure the grant of Letters Patent and related intellectual property to Lilly or its nominees, in the United States and in all other countries where Lilly may

desire to have such inventions, or any of them, patented, with specifications and claims in such form as shall be approved by counsel for Lilly and to vest and confirm in Lilly or its nominees the full and complete legal and equitable title to all such Letters Patent and related intellectual property.

IN WITNESS WHEREOP we have executed this assignment on the date indicated below.
10/11/99 Read Web Kandraum
Date James Web Kassebaum
10/1/99 Cand Chomas Ch
Date Paul Thomas Pugh
10/4/89 Title 1880
//Date William Webster Thompson
UNITED STATES OF AMERICA
STATE OF INDIANA)) ss: (DATE) / / / - 9 / / / - 9 / / / / / / / / / /
Before me, a Notary Public for HANCOCK County, State of Indiana, personally appeared James Web Kassebaum and acknowledged the execution of the foregoing instrument this Hay of
$19\overline{91}$.
Notary Public
My Commission Expires
7-1-60
UNITED STATES OF AMERICA
CMAME OF THOTANA \
COUNTY OF HANCOCK) (DATE) /0/7/99
Before me, a Notary Public for Ancock County, State of Indiana, personally appeared Paul Thomas Pugh and acknowledged the execution of the foregoing instrument this 774 day of October
Patricia Leitledge Notary Public
fy Commission Expires
01-27-06

UNITED STATES OF AMERICA

STATE OF INDIANA)) ss:	(DATE)	10/7/99
COUNTY OF HANCOCK)	/	
	ublic for <u>Lancock</u>	
Indiana, personally appeared execution of the foregoing	d William Webster Thomp instrument this <u>7774</u>	son and acknowledged the day of October,
19 <u>99</u> .	_ Patri	eia Lutteda
	Notary P	ublic /
My Commission Expires		•

REGO DATION COVER SHEET			
PATENT	S ONLY Attny Docket No. X-11121		
To the Honorable Commissioner of Patents and Trade	emarks: Flease record the attached original		
documents or copy thereof:			
1. Name of conveying party(ies):	2. Name & address of receiving party(ies):		
James Web Kassebaum	man visa a daman		
Paul Thomas Pugh William Webster Thompson	Name: Eli Lilly and Company		
William Menacei inombaon	Internal Address: Patent Division		
Additional name(s) of conveying party(ies)	Illerial Address. Ideans 51.1510		
Attached? () Yes (X) No	Street Address: Lilly Corporate Center		
	City: Indianapolis State: IN Zip: 46285		
3. Nature of conveyance:	Additional name(s) & address(es) attached?		
(X) Assignment () Merger	() Yes (X) No		
() Security Agreement () Change of Name	(1) 100		
() Other			
Execution Date: July 21, 2000	i		
4. Application number(s) or patent Number(s)	•		
This document is being filed with a 35 U.S.C.	371 application of DCT/USAA/19549		
international filing date of 26 July 2000	. 3/1 application of relyobourges,		
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Additional Numbers atta			
5. Name and address of party to whom	6. Total number of applications and		
correspondence concerning documents should be mailed:	patents involved: (1)		
should be malled:	7. Total fee (37 CFR \$3.41) \$40.00		
Kimberly S. Rhoades	(\$40.00 per assignment)		
Eli Lilly and Company	(\$10.00 per appraisone,		
Lilly Corporate Center	() Enclosed		
Indianapolis, IN 46285	(X) Authorized to be charged to		
	deposit account (along with any		
I	additional fees or the credit of		
i	any overpayment)		
DO NOT USE	8. Deposit account number: 05-0840		
DO NOT ORB	THIS SPACE		
9. Statement and signature.	· · · · · · · · · · · · · · · · · · ·		
To the best of my knowledge and belief, t	he foregoing information is true and		
correct and any attached copy is a true of	opy of the original document.		
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John C. Demeter Name of Attorney Signing Signature	Date		
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I hereby certify that this paper or fee is being d	enneited with the United States Postal Service		
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Docket No. X-11121

ASSIGNMENT

WHEREAS we, James Web Kassebaum, City of Indianapolis, County of Marion, State of Indiana; Paul Thomas Pugh, City of Knightstown, County of Henry, State of Indiana; and William Webster Thompson, City of Indianapolis, County of Marion, State of Indiana, have made an invention which is the subject of an international application under the Patent Cooperation Treaty ("PCT") patent application entitled TOPICAL ORGANIC ECTOPARASITICIDAL FORMULATIONS, containing 19 pages, and which is to be filled in the United States Patent and Trademark Office acting as PCT Receiving Office ("Application"); and we hereby authorize and direct our common representative to insert below the filing date and application number when they become known: PCT/US 00 /19549filed 7/26/00; and

WHEREAS ELI LILLY AND COMPANY, an Indiana corporation having its principal place of business at Lilly Corporate Center, Indianapolis, Indiana 46285, wishes to acquire the entire interest in all inventions disclosed in such Application;

NOW, THEREFORE, in consideration of the sum of one dollar (\$1.00) and other good and valuable consideration, the receipt of which is hereby acknowledged, we hereby sell, assign, transfer and set over unto Eli Lilly and Company, its successors and assigns (collectively "Lilly") our entire right, title and interest in, to and under the Application, including all priority rights for other countries arising therefrom, all inventions therein disclosed, and any and all present or future patent applications to such inventions that may be filed in the United States or any foreign country, inclusive of, but not limited to, continuations, continuations-in-part, divisions, substitutions, reexaminations, reissues, international applications under the Patent Cooperation Treaty ("PCT"), United States provisional patent applications, certificates of addition, utility models, petty patents, as well as all other intellectual property related to the Application, inclusive of, but not limited to, supplementary protection certificates, copyrights, trademarks, and data package exclusivity rights; and any and all Letters Patent of the United States and of all foreign countries and all related patent term extensions which may be granted for Letters Patent with respect to the Application; all of the above to be held and enjoyed by Lilly for its own use and enjoyment to the full end of the term or terms for which such Letters Patent and related intellectual property rights may be granted, as fully and entirely as the same would have been held and enjoyed by us had this Assignment and sale to Lilly not been made.

For ourselves and for our heirs, successors and legal representatives, we covenant that no assignment, sale, agreement or encumbrance

For ourselves and for our heirs, successors and legal representatives, we further covenant and agree with Lilly that upon request we and they will, without further consideration than that now paid, but at the expense of Lilly: (i) execute original, provisional, substitute, continuation, divisional, continuation-in-part, reexamined, or reissued applications, amended specifications, or rightful declarations or oaths for such application; (ii) communicate to Lilly any facts known to us or them relating to such inventions or the history thereof; (iii) execute preliminary statements and testify in any interference proceedings, litigation discovery proceedings and depositions, oppositions, cancellation proceedings, priority contests, public use proceedings, administrative agency proceedings, litigation and other court actions and the like; (iv) execute and deliver any application papers, affidavits, declarations, assignments, or other instruments; and (v) do all other acts which, in the opinion of counsel for Lilly, may be necessary or desirable to secure the grant of Letters Patent and related intellectual property to Lilly or its nominees, in the United States and in all other countries where Lilly may desire to have such inventions, or any of them, patented, with specifications and claims in such form as shall be approved by counsel for Lilly and to vest and confirm in Lilly or its nominees the full and complete legal and equitable title to all such Letters Patent and related intellectual property.

has been or will be made or entered into which would conflict with this

Assignment.

Docket No. X-11121

IN WITNESS WHEREOF we have executed this assignment on the date indicated below.
Date James Web Rassebaum
UNITED STATES OF AMERICA
STATE OF INDIANA) ss:
COUNTY OF
Before me, a Notary Public for Hancock County, State of Indiana, personally appeared James Web Kassebaum and acknowledged the execution of the foregoing instrument this Old day of July, 2000.
My commission expires:
Agril 10,2008
July 21, 2000 Paul Thomas Pugh Romant
UNITED STATES OF AMERICA
STATE OF INDIANA) SECOUNTY OF)
Before me, a Notary Public for Janeste County, State of Indiana, personally appeared Paul Thomas Pugh and acknowledged the execution of the foregoing instrument this 210+ day of 2000.
My commission expires:
april 10, 2008

Docket No. X-11121

7/0	21/00	
77	Date	

William Webster Thempson

UNITED STATES OF AMERICA

STATE	OF	INDIANA
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COUNTY OF

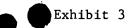
33:

COUNTY OF

Solucia & Surchart
Notary Public

My commission expires:

april 10, 2008



PCT

WORLD INTELLECTUAL PROPERTY ORGANIZATION International Bureau



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6:		τ~	7710 00000
•	A2	(1	1) International Publication Number: WO 00/01347
A61K	1 12	(4	3) International Publication Date: 13 January 2000 (13.01.00)
(21) International Application Number: PCT/US (22) International Filing Date: 21 June 1999 ((30) Priority Data: 60/091,658 2 July 1998 (02.07.98) (71) Applicant (for all designated States except US): EL AND COMPANY [US/US]; Lilly Corporate Cernanapolis, IN 46285 (US). (72) Inventor; and // (75) Inventor/Applicant (for US only): SNYDER, Date [US/US]; 7348 Yorkshire Boulevard, Indianapolis, (US). (74) Agents: GRAY, Edouard, P. et al., Eli Lilly and Control Lilly Corporate Center, Indianapolis, IN 46285 (US).	I LILL Liter, Inc niel, Ea IN 462	US Y di-	(81) Designated States: AE, AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CU, CZ, EE, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, RO, RU, SD, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published Without international search report and to be republished upon receipt of that report.
(A) This FORMULATIONS FOR CONTROLLING III	TTA CANI	Y Y/	
(54) Title: FORMULATIONS FOR CONTROLLING H	UMAN	LIC	J.C.
Safer pediculicidal formulations comprising a spinos acceptable carrier, and methods of controlling lice infestat	yn, or a tions in	phy a h	ysiologically acceptable derivative or salt thereof, and a physiologically uman with these formulations are provided.



US006063771X

United States Patent [19]

Snyder

5,227,163

5,288,483

5,496,931

[11] Patent Number: 6,063,771

Date of Patent:

May 16, 2000

[54]	FORMU HUMAN		ONS FOR CONTROLLING
[75]	Inventor:	Dani	lel Earl Snyder, Indianapolis, Ind.
[73]	Assignee	Eli I Ind.	and Company, Indianapolis,
[21]	Appl. No	.: 09/3	38,116
[22]	Filed:	Jun.	22, 1999
	Re	lated	U.S. Application Data
[60]			ation No. 60/091,658, Jul. 2, 1998.
[51]	Int. Cl.7		A61K 31/70
			514/31 ; 514/881
[58]	Field of	Search	514/310
[56]		Re	eferences Cited
	U	.s. pa	TENT DOCUMENTS
4	,927,813	5/1990	Bernstein 514/65
			Mynderse et al 435/76
	227 162	7/1002	Till1 404/105 1

7/1993 Eini et al. 424/195.1

2/1994 Cardin et al. 424/70

3/1996 Boeck et al. 536/7.1

5,591,606	1/1997	Turner et al 435/76
5,767,253	6/1998	Turner et al 536/6.5
5.840.861	11/1998	Mynderse et al 536/16.8

OTHER PUBLICATIONS

CA130:193066, Sparks et al, J. Econ. Entomol., 91(6), 1277-1283, 1998.

CA126:234728, Deamices et al., ACS Sympos. Ser, 658, 144-154, 1997.

C.V. DeAmicis et al. "Physical and Biological Properties of the Spinosyns: Novel Macrolide Pest-Control Agents from Fermentation," American Chemical Society Symposium Series: Phytochemicals for Pest Control, Chapter 11, pp. 144-154 (1977).

Primary Examiner-Rebecca Cook Attorney, Agent, or Firm-Frederick D. Hunter

[57] **ABSTRACT**

Safer pediculicidal formulations comprising a spinosyn, or a physiologically acceptable derivative or salt thereof, and a physiologically acceptable carrier, and methods of controlling lice infestations in a human with these formulations are provided.

14 Claims, No Drawings



(12) United States Patent Snyder

(10) Patent No.:

US 6,342,482 B1

(45) Date of Patent:

*Jan. 29, 2002

FORMULATIONS FOR CONTROLLING **HUMAN LICE**

(75) Inventor: Daniel Earl Snyder, Indianapolis, IN

(US)

Assignee: Eli Lilly and Company, Indianapolis, IN (US)

Subject to any disclaimer, the term of this (*) Notice: patent is extended or adjusted under 35

U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: 09/543,441

(22) Filed: Apr. 5, 2000

Related U.S. Application Data

(63) Continuation of application No. 09/338,116, filed on Jun. 22, 1999, now Pat. No. 6,063,771.

Provisional application No. 60/091,658, filed on Jul. 2, (60)

(51) Int. Cl.⁷ A61K 31/76

U.S. Cl. 514/31; 514/880 (52) (58) Field of Search 514/31

(56) References Cited

U.S. PATENT DOCUMENTS

4,927,813 A 5/1990 Bernstein 5,202,242 A 4/1993 Mynderse et al.

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5,288,483 A		Cardin et al.
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5,571,901 A	11/1996	Boeck et al.
5,591,606 A	1/1997	Turner et al.
5,767,253 A	6/1998	Turner et al.
5,840,861 A	11/1998	Mynderse et al.

FOREIGN PATENT DOCUMENTS

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wo	93 09126	5/1993

OTHER PUBLICATIONS

C.V. DeAmicis, et al, "Physical and Biological Porperties of the Spinosyns: Novel Macrolide Pest-Control Agents from Fermentation," American Chemical Society Symposium Series: Phytochemicals for Pest Control, Chapter 11, pp. 144-154 (1997).

CA 130: 193066, Sparks, et al., J. Econ. Entomol., 91 (6) 1277-1283 (1998).

CA 126: 234728, de Amicis, et al., ACS Sympos. Ser. 635, 144-154 (1997).

Primary Examiner—Rebecca Cook

(74) Attorney, Agent, or Firm-John C. Demeter

ABSTRACT

Safer pediculicidal formulations comprising a spinosyn, or a physiologically acceptable derivative or salt thereof, and a physiologically acceptable carrier, and methods of controlling lice infestations in a human with these formulations are provided.

12 Claims, No Drawings

Exhibit 4

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Post Island as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Arlington, VA 22202, on the date appearing below ELI LILLY AND COMPANY

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

: James Web Kassebaum, et al. Applicants

Serial No. : 10/048,242

Group Art Unit:

Filed : September 13, 2002 1614

For : TOPICAL ORGANIC

ECTOPARASITICIDAL FORMULATIONS)

Docket No. : X-11121

REQUEST FOR CORRECTED FILING RECEIPT

Assistant Commissioner for Patents Office of Initial Patent Examination Customer Service Center Arlington, VA 22202 Sir:

Applicants request correction of the filing receipt for this application. A copy of the receipt, with the corrections noted, is enclosed.

Under the heading "Domestic Priority data as claimed by applicant," please replace the current text with --This application is a 371 of PCT/US00/19549 07/26/2000, which claims priority from U.S. provisional application no. 60/148,508, filed August 12, 1999.

Applicants therefore request that the filing receipt be corrected.

Respectfully submitted,

John C. Demeter

Attorney for Applicants

Registration No.

Phone: 317-276-3785

Eli Lilly and Company Patent Division

P.O. Box 6288

Indianapolis, Indiana 46206-6288

December 11,2002

Enclosure: Copy of Filing Receipt with the changes noted thereon.





DRAWINGS GRP ART UNIT FIL FEE REC'D ATTY.DOCKET.NO TOT CLAIMS IND CLAIMS APPLICATION NUMBER FILING DATE 1570 X-11121 15 1614 10/048,242 / 09/13/2002

CONFIRMATION NO. 2645

25885 **ELI LILLY AND COMPANY** PATENT DIVISION P.O. BOX 6288 **INDIANAPOLIS, IN 46206-6288** **FILING RECEIPT**

Date Mailed: 12/03/2002

Receipt is acknowledged of this regular Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please write to the Office of Initial Patent Examination's Filing Receipt Corrections, facsimile number 703-746-9195. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

Applicant(s)

James Web Kassebaum, Indianapolis, IN; Paul Thomas Pugh, Knightstown, IN; 🗸 William Webster Thompson, Indianapolis, IN;

Domestic Priority data as claimed by applicant

This application is a 371 of PCT/US00/19549 07/26/2000, which claims priority from U.S. provisional application no 60/148,508, filed August 12,1999. Foreign Applications

Projected Publication Date: None, application is not eligible for pre-grant publication

Non-Publication Request: No

Early Publication Request: No

0EC 16 A02

Title

Topical organic ectoparasiticidal formulations

Preliminary Class



PATENT	Dkt. No Atty
RECEIVED BY THE UN	NITED STATES
PATENT AND TRADEN	IARK OFFICE
	Interference No
Filed: September 13 2002	Parties:
Applicants: Kassebaum etal.	
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Response	Amendment/Response
IDS/1449	Assignment/Cover Sheet
Notice of Appeal	ssue Fee
Letter Trans./Brief	Express Abandonment
Affirm 821/Diskette	Fee Authorization
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